

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 September 2003 (25.09.2003)

PCT

(10) International Publication Number
WO 2003/078045 A3

- (51) International Patent Classification⁷: **G01N 15/06**, C12M 1/00, C12N 11/16, C12Q 1/68
- (21) International Application Number: PCT/US2003/007688
- (22) International Filing Date: 12 March 2003 (12.03.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/363,869 12 March 2002 (12.03.2002) US
- (71) Applicant (for all designated States except US): SYN-
GENTA PARTICIPATIONS AG [CH/CH]; Schwarzwald-
allee 215, CH-4058 Basel (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): PASZKOWSKI,
Jerzy [CH/CH]; Blauenweg 10, CH-4224 Nenzlingen
(CH). GUTTMAN, Andras [US/US]; 12525 Maestro
Court, San Diego, CA 92130 (US). WANG, Xun [US/US];
12524 Caminito Vista Soledad, San Diego, CA 92130
(US).
- (84) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NI, NO, NZ, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ,
TM, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
25 March 2004
- For two-letter codes and other abbreviations, refer to the "Guide-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: MICROCAPILLARY HYBRIDIZATION CHAMBER

(57) Abstract: The invention provides a microcapillary hybridization chamber made of a narrow bore tubing with probe segments. Each probe segment has oligonucleotide probes covalently attached to the inner wall of the tubing and the oligonucleotide probes within each segment have identical, known sequences. Many oligonucleotide probe segments can be present within a single centimeter of tubing. The invention further provides methods for using the microcapillary hybridization chambers in hybridization assays.



WO 2003/078045 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/07688

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 15/06; C12M 1/00; C12N 11/16; C12Q 1/68

US CL : 435/6, 174, 283.2, 287.2; 422/68.1, 82.05

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 174, 283.2, 287.2; 422/68.1, 82.05

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST, DIALOG

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,294,392 B1 (KUHR et al) 25 September 2001 (25.09.2001) columns 8, 10, 18, 21 and 25.	1-28
X	US 5,763,263 A (DEHLINGER) 09 June 1998 (09.06.1998) columns 4, 11, 17 and 18.	1, 4-9, 12-14, 19-21
Y		2-3, 10-11, 15-18, 22-28

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

17 September 2003 (17.09.2003)

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Date of mailing of the international search report

Authorized officer

BJ Forman

Telephone No. (703) 308-0196